United States Department of the Interior

FISH AND WILDLIFE SERVICE
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June 20, 2017

To: Interested Parties

From: Scott Voss, Fish Biologist, Red Bluff Fish and Wildlife Office

Subject: Biweekly report (June 4, 2017 - June 17, 2017)

Please find attached preliminary daily estimates of passage, 90% confidence intervals, and fork length ranges of unmarked juvenile salmonids sampled at Red Bluff Diversion Dam for the period June 4, 2017 through June 17, 2017. Race designation was assigned using length-at-date criteria.

This report also contains graphical displays of salmonid passage dating back to 2010 for comparison.

Please note that data contained in these reports is subject to revision as this data is preliminary and undergoing QA/QC procedures.

If you have any questions, please feel free to contact me at (530) 527-3043 ext 243.

Table 1.– Preliminary estimates of passage by brood-year (BY) and run for unmarked juvenile Chinook salmon and steelhead trout captured by rotary-screw traps at Red Bluff Diversion Dam (RK391), Sacramento River, CA, for the dates listed below. Results include estimated passage, peak river discharge volume, water temperature, turbidity, and fork length (mm) range in parentheses. A dash (-) indicates that sampling was not conducted on that date.

Date	Discharge volume (cfs) [1]	Water temperature (°C)	Water turbidity (NTU)	Estimated passage				
				BY16 Winter	BY16 Spring	BY16 Fall	BY17 Late-Fall	BY17 RBT
6/4/2017	12,942	14.9	8.6	0 (–)	123 (114 – 124)	8,148 (61 – 111)	0 (–)	82 (20 – 91)
6/5/2017	13,181	14.8	7.7	0 (–)	205 (114 – 125)	7,159 (68 – 113)	41 (47)	0 (–)
6/6/2017	13,181	14.8	8.7	0 (–)	191 (115 – 120)	8,297 (60 – 111)	0 (–)	49 (25)
6/7/2017	13,054	14.7	7.6	0 (–)	39 (117)	4,743 (63 – 111)	0 (–)	80 (25 – 67)
6/8/2017	12,990	13.5	9.5	0 (–)	40 (131)	4,724 (64 – 115)	0 (–)	42 (27)
6/9/2017	12,878	13.4	7.5	0 (–)	0 (–)	4,256 (68 – 113)	0 (–)	0 (–)
6/10/2017	12,214	13.8	7.3	0 (–)	41 (125)	5,362 (71 – 116)	0 (–)	37 (28)
6/11/2017	12,066	13.6	7.4	0 (–)	39 (121)	5,977 (68 – 114)	0 (–)	0 (–)
6/12/2017	12,066	13.7	7.1	0 (–)	0 (–)	6,884 (60 – 116)	0 (–)	0 (–)
6/13/2017	12,033	14.3	7	0 (–)	77 (121 – 128)	7,378 (69 – 117)	0 (–)	0 (–)
6/14/2017	11,885	14.8	6.8	0 (–)	43 (130)	7,157 (68 – 120)	0 (–)	37 (26)
6/15/2017	11,719	15.2	7	0 (–)	0 (–)	6,512 (66 – 120)	0 (–)	0 (–)
6/16/2017	11,669	15.8	6.5	0 (–)	0 (–)	5,378 (58 – 113)	0 (–)	34 (24)
6/17/2017	11,719	16.0	7.8	0 (–)	78 (124 – 128)	4,836 (66 – 119)	39 (36)	78 (27 – 66)
Biweekly Total [2]				**0**	**876**	**86,811**	**80**	**439**
Biweekly Lower 90% Confidence Interval				0	299	65,703	-84	56
Biweekly Upper 90% Confidence Interval				0	1,453	107,919	244	822
Brood Year Total				**537,519**	**991,511**	**18,545,311**	**19,236**	**4,928**
Brood year Lower 90% Confidence Interval				385,409	-257,789	-14,569,354	-7,720	-1,139
Brood year Upper 90% Confidence Interval				689,630	2,240,812	51,659,979	46,192	10,995

[1] Peak daily discharge values do not account for diversions at RBDD and only represent peak flows registered at the Bend Bridge Gauging station (http://cdec2.water.ca.gov/cgi-progs/queryFx?bnd).

[2] Biweekly totals may be greater than the sum of the daily estimates presented in this table if sampling was not conducted on each day of the biweekly period. A dash (-) denotes those dates. To estimate daily passage for days that were not sampled, we impute missed sample days with the weekly mean value of days sampled within the week.

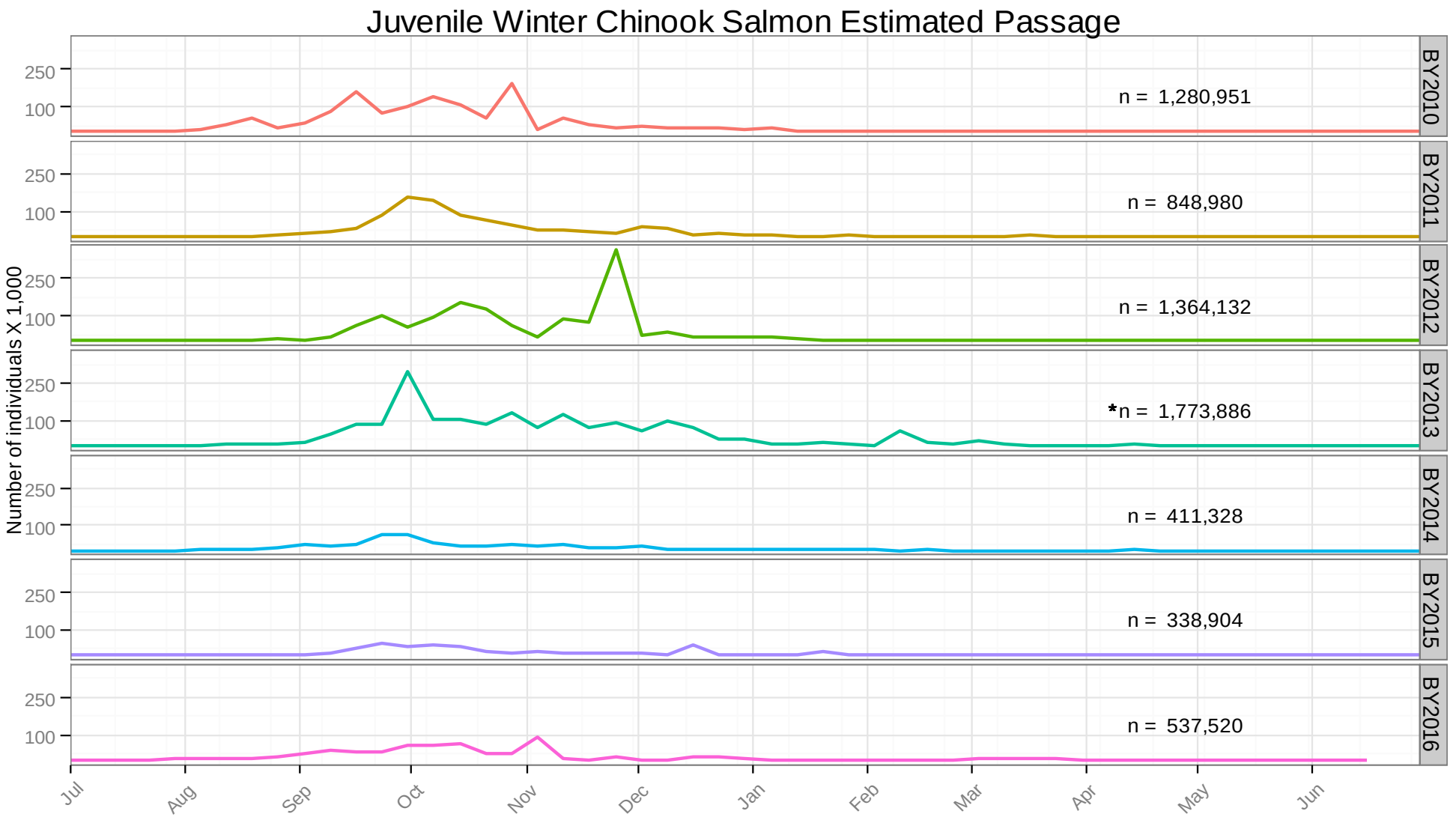

Figure 1. Weekly estimated passage of unmarked juvenile winter Chinook salmon at Red Bluff Diversion Dam (RK391) by brood-year (BY). Fish were sampled using rotary-screw traps for the period July 1, 2010 to present .

*Winter run passage value interpolated using a monthly mean for the period October 1, 2013 - October 17, 2013 due to government shutdown .

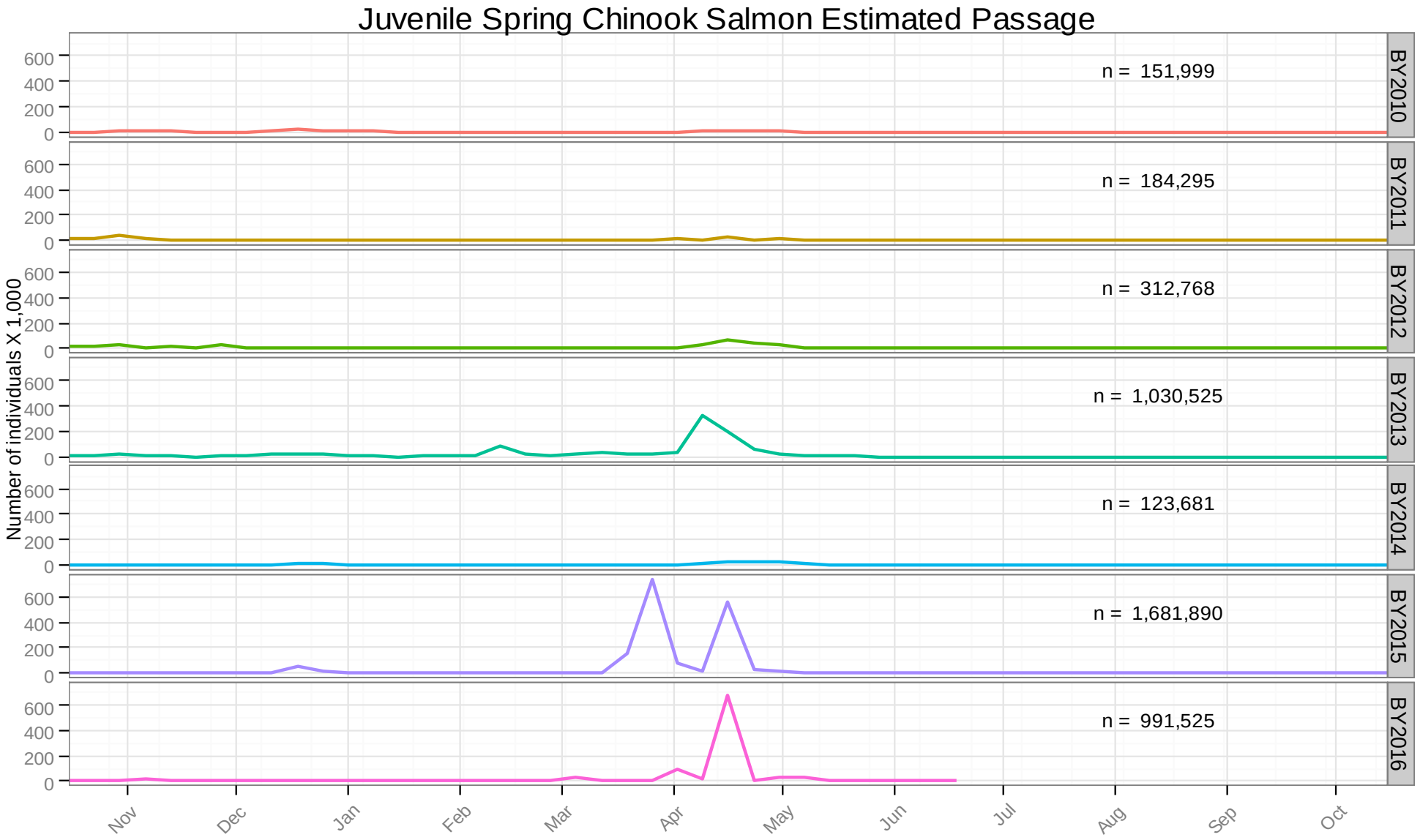

Figure 2. Weekly estimated passage of unmarked juvenile spring Chinook salmon at Red Bluff Diversion Dam (RK391) by brood-year (BY). Fish were sampled using rotary-screw traps for the period October 16, 2010 to present .

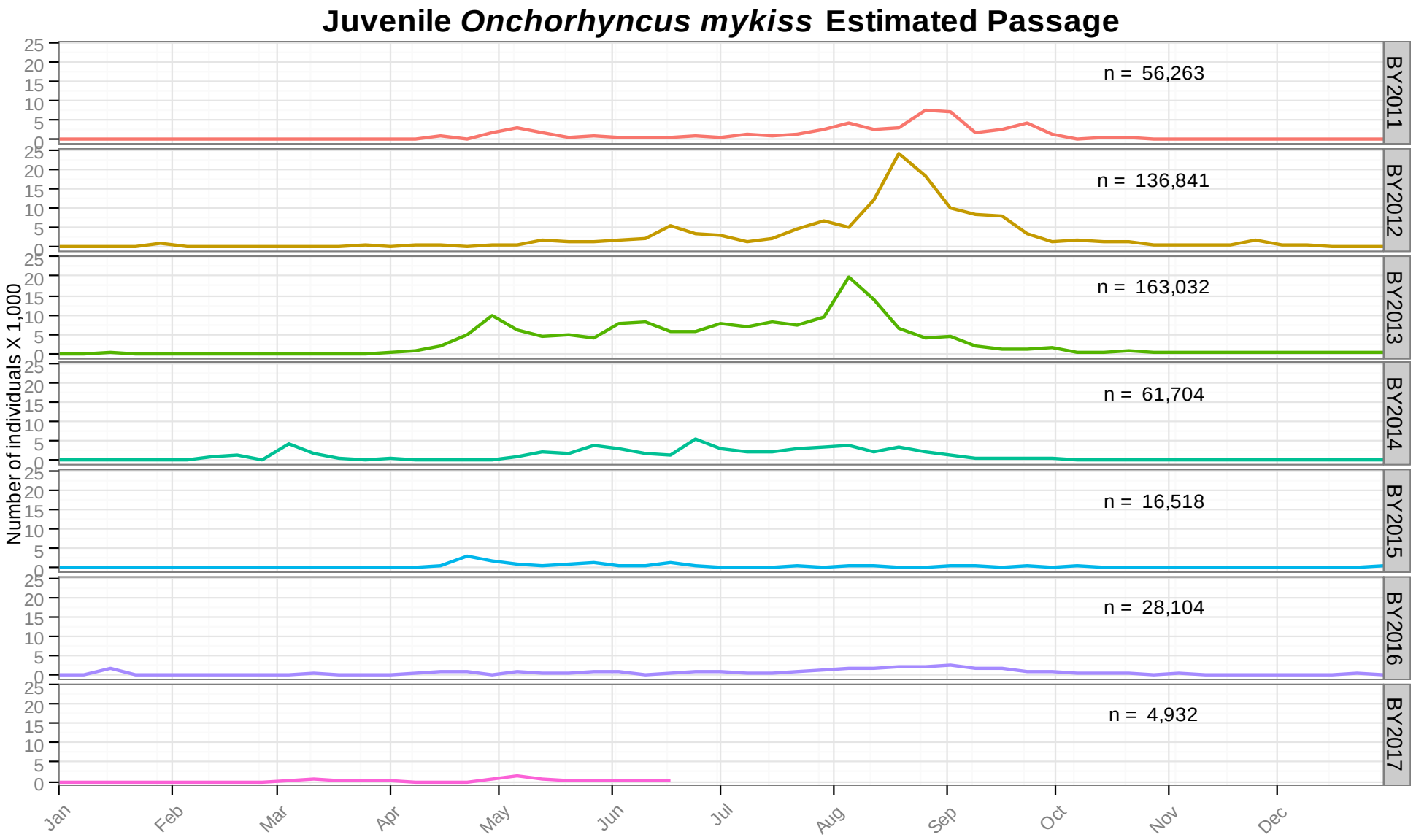

Figure 3. Weekly estimated passage of unmarked juvenile Rainbow/Steelhead trout at Red Bluff Diversion Dam (RK391) by brood-year (BY). Fish were sampled using rotary-screw traps for the period January 1, 2011 to present .

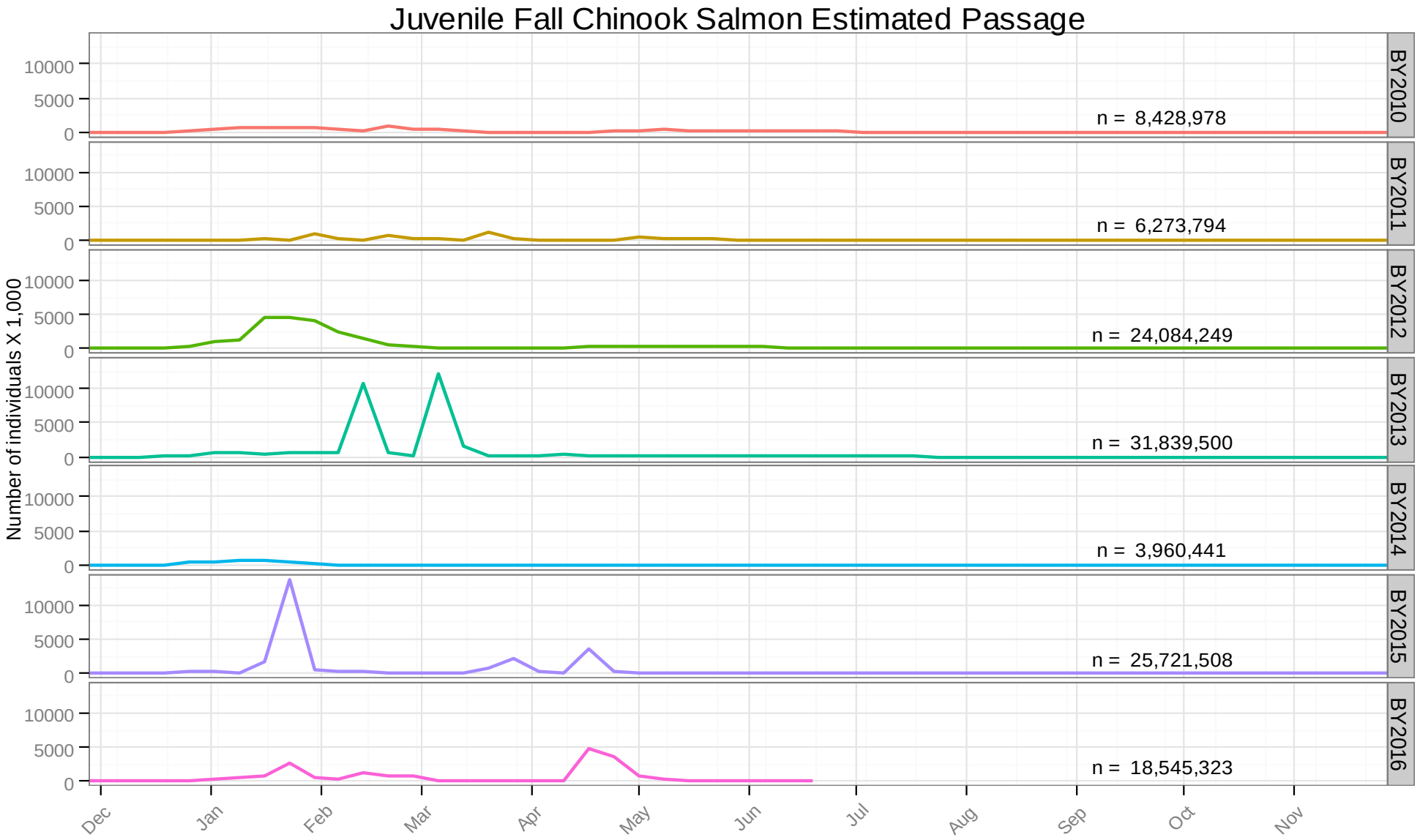

Figure 4. Weekly estimated passage of unmarked juvenile fall Chinook salmon at Red Bluff Diversion Dam (RK391) by brood-year (BY). Fish were sampled using rotary-screw traps for the period December 1, 2010 to present .

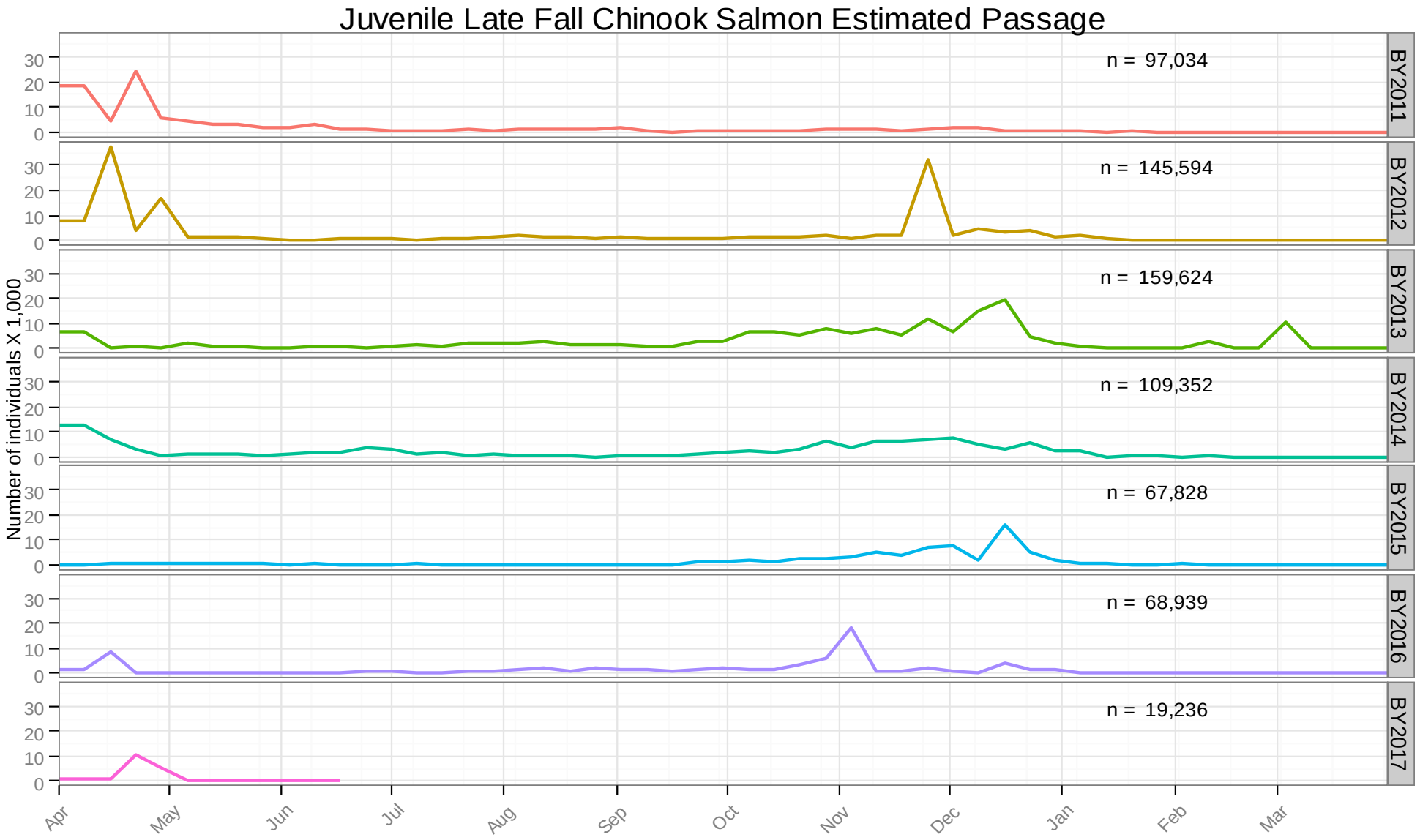

Figure 5. Weekly estimated passage of unmarked juvenile late fall Chinook salmon at Red Bluff Diversion Dam (RK391) by brood-year (BY). Fish were sampled using rotary-screw traps for the period April 1, 2011 to present .

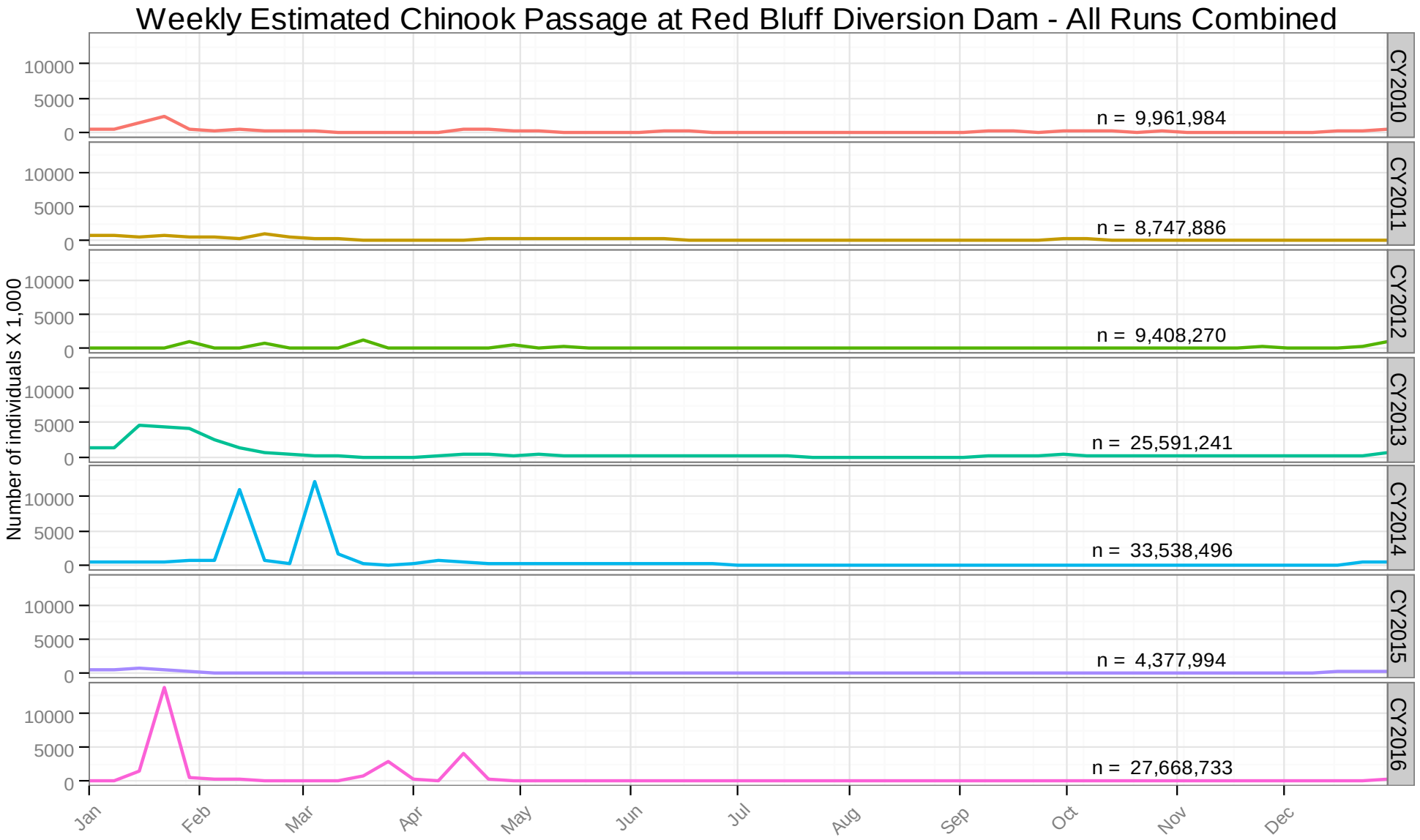

Figure 6. Weekly estimated passage of unmarked juvenile Chinook salmon at Red Bluff Diversion Dam (RK391) by calendar year. Fish were sampled using rotary-screw traps for the period January 1, 2010 to December 31, 2016